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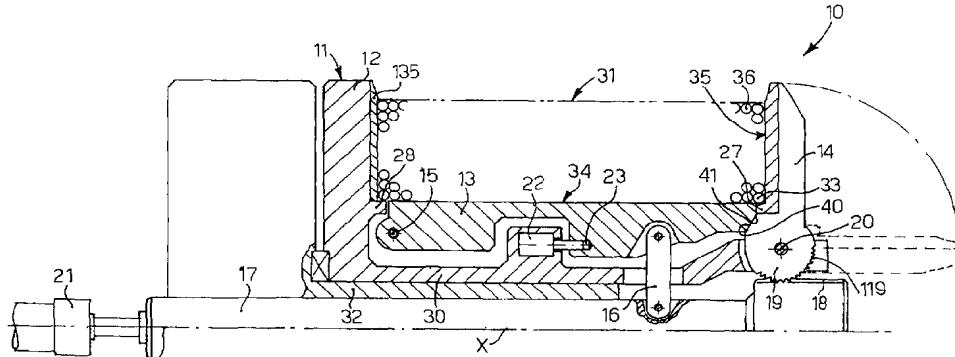
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(54) Title: COILING DEVICE AND METHOD FOR ROLLED OR DRAWN LONG PRODUCTS



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(57) Abstract: Coiling device (10) and relative coiling method for rolled or drawn long products, comprising a mandrel (11), arranged cantilevered and rotatable with respect to a central longitudinal axis (X), and on which the long products are wound in adjacent and superimposed spirals (33), in order to form a compact coil (31) having the geometric shape of a circular ring with lateral flanks substantially orthogonal, or very angled, with respect to the central longitudinal axis (X). The mandrel (11) comprises a flange (12) substantially orthogonal, or very angled, with respect to the central longitudinal axis (X) which defines a first lateral flank of the coil (31). The mandrel (11) also comprises first arm elements (13) which define the cylindrical surface of the core that forms the coil (31), and second arm elements (14), opposite the flange (12), which define a second flank of the coil. The first and the second arm elements (13, 14) are mobile between a first coil-forming position and a second coil-removal position.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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A. CLASSIFICATION OF SUBJECT MATTER
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3 105 653 A (BECKWITH ALBERT C)	1-7,14
	1 October 1963 (1963-10-01)	
	cited in the application	
X	column 1, line 21 - line 31	21-25,28
	column 3, line 63 - column 4, line 21	
	column 4, line 45 - line 56; figures	

A	DE 32 16 397 A (BATTENFELD EXTRUSIONSTECH)	1-6
	10 November 1983 (1983-11-10)	
	cited in the application	
X	page 10, paragraph 3; figure 1	21-25,28

A	DE 38 09 496 A (JOHANN LEIMBACH KG MASCHF)	1-7,
	5 October 1989 (1989-10-05)	10-12,
	cited in the application	14-20
	column 3, line 1 - line 36	
	column 4, line 44 - column 5, line 12;	
	figures	

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Further documents are listed in the continuation of box C.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2 529 185 A (PROCTOR HOMER G) 7 November 1950 (1950-11-07) cited in the application column 1, line 44 - column 2, line 1; figures column 2, line 36 - line 42 -----	1,10-12, 14-20
A	FR 2 048 176 A (GAUDIAS ET BERGERON ETS) 19 March 1971 (1971-03-19) page 2, line 4 - line 24; figures -----	10-12
A	US 2 638 283 A (BEBECH MICHAEL J) 12 May 1953 (1953-05-12) column 3, line 27 - line 39 column 3, line 66 - column 4, line 18; figures -----	11,15-17
A	DE 11 34 950 B (EISENGIESSEREI G M B H; WILHELM BREITENBACH MASCHINENF) 23 August 1962 (1962-08-23) column 2, line 42 - line 48; figure 1 -----	1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
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Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 3105653	A	01-10-1963	NONE			
DE 3216397	A	10-11-1983	DE	3216397 A1		10-11-1983
DE 3809496	A	05-10-1989	DE	3809496 A1		05-10-1989
US 2529185	A	07-11-1950	NONE			
FR 2048176	A	19-03-1971	FR	2048176 A5		19-03-1971
US 2638283	A	12-05-1953	NONE			
DE 1134950	B	23-08-1962	NONE			